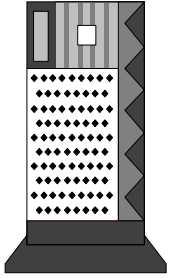


Ultra Enterprise

Workgroup, Departmental & Data Center Servers

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- ◆ *Ultra Enterprise 5000 and 6000 Servers* Page 76
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- ◆ *Server Option Compatibility and Pricing* Page 98

Ultra Enterprise 150 Server

	
Product Specifications	Ultra Enterprise 150
Packaging	Tower
CPU	UltraSPARC-I
Number of CPUs	1
Clock Speed	167 MHz
On-Chip Cache	32KB (16KB I-cache + 16KB D-cache)
External Cache	512KB
Main Memory	32MB – 1GB
Maximum Internal Disk	25.2GB Hot Plug
Maximum External Disk	324GB: Up to 4 SPARCstorage Array Model 112 or 1 SPARCstorage Array Model 210
I/O Slots	2 SBus
Ethernet	Fast Wide Ethernet, twisted pair standard (10- and 100-BaseT)
Solaris License	Solaris 2.5.1 or later
Performance	
SPECint95	6.34
SPECfp95	9.33
SPECrate_int95	57
SPECrate_fp95	84
AIM3	1,450
Laddis	2,102
Est. TPM	1,332

Ultra Enterprise 150 Server – Ordering Flow Chart – New Systems

This is a sample ordering guide for the Ultra Enterprise 150 server. Each step outlined by a large box in the guide represents a line item on a server sales order. A minimum legal configuration can be created by choosing steps 1 and 2 of the order process. Larger configurations can be created by choosing multiple options.

Step 1: (Choose only one)

TOWER OR RACK READY ENCLOSURE

New Systems Only

Either:

E150-UBA1-CB –
Tower Enclosure

Or:

E150-UBA1R-CB –
Rack Ready Enclosure

OR

CHASSIS UPGRADE FROM ANY SPARCserver

Either:

U-E150-UBA1-CB –
Tower Enclosure

Or:

U-E150-UBA1R-CB –
Rack Ready Enclosure

SERVER BASE PACKAGES:

<i>Part Number</i>	<i>Description</i>	<i>List Price</i>	<i>Discount Category</i>
E150-UBA1-CB	Enterprise 150 Tower System with 167MHz UltraSPARC-I processor, 512KB UltraCache, no memory, 2.1GB storage drive, Solaris Server license (which includes a license to run Solstice DiskSuite, providing support for Raid 0,1,5, Solstice AdminSuite, Solstice Backup), internal 3.25" floppy disk, SunCD 4, and Sunswift Card providing Fast Wide SCSI and 100 BaseT.	\$13,045	A
E150-UBA1R-CB	Enterprise 150 Rack Ready System with 167MHz UltraSPARC-I processor, 512KB UltraCache, no memory, 2.1GB storage drive, Solaris Server license (which includes a license to run Solstice DiskSuite, providing support for Raid 0,1,5, Solstice AdminSuite, Solstice Backup), internal 3.25" floppy disk, SunCD 4, and Sunswift Card providing Fast Wide SCSI and 100 BaseT.	\$13,045	A

SERVER UPGRADE PACKAGES:

<i>Part Number</i>	<i>Description</i>	<i>List Price</i>	<i>Discount Category</i>
U-E150-UBA1-CB	Chassis upgrade from any SPARCserver to Sun Enterprise 150 Tower System with one 167MHz UltraSPARC-I processor, no memory, 2.1GB internal system drive, 2.1GB internal storage drive, SunCD4 internal CD-ROM, 1.44MB internal floppy drive.	\$12,045	A
U-E150-UBA1R-CB	Chassis upgrade from any SPARCserver to Sun Enterprise 150 Rack System with one 167MHz UltraSPARC-I processor, no memory, 2.1GB internal system drive, 2.1GB internal storage drive, SunCD4 internal CD-ROM, 1.44MB internal floppy drive.	\$12,045	A

Ultra Enterprise 150 Server – Ordering Flow Chart – New Systems (continued):**Step 2: (Required)****SYSTEM MEMORY**

SIMMs can only be added in pairs up to a maximum of 4 pairs.

Choose from the following:

7001A – 32MB ECC memory expansion (2 x 16MB SIMMs)

7002A – 64MB ECC memory expansion (2 x 32MB SIMMs)

7003A – 128MB ECC memory expansion (2 x 64MB SIMMs)

7004A – 256MB ECC memory expansion (2 x 128MB SIMMs)

SYSTEM MEMORY:

<i>Part Number</i>	<i>Description</i>	<i>List Price</i>	<i>Discount Category</i>
7001A	32MB ECC memory expansion (2 x 16MB SIMMs)	\$800	A*
7002A	64MB ECC memory expansion (2 x 32MB SIMMs)	\$1,400	A*
7003A	128MB ECC memory expansion (2 x 64MB SIMMs)	\$2,700	A*
7004A	256MB ECC memory expansion (2 x 128MB SIMMs)	\$12,000	A*

Step 3: (Optional)**ADDITIONAL INTERNAL DISKS**

Single disks can be added.
Maximum 12 disks per configuration.
(Base system includes 1 system disk and 1 data disk.)

5153A – 2.1GB Internal Fast/Wide SCSI-2 Disk

ADDITIONAL INTERNAL DISKS:

<i>Part Number</i>	<i>Description</i>	<i>List Price</i>	<i>Discount Category</i>
5153A	2.1GB Internal Hot Plug Disk Drive, 7200 RPM, 1" high.	\$1,050	A*

Step 4: (Optional)**INTERNAL STORAGE**

One internal 4mm tape drive may be added.

Choose from the following:

6256A – 4–8GB 4mm DDS-2 Tape Drive

6286A – 12–24GB 4mm DDS-3 Tape Drive

INTERNAL STORAGE:

<i>Part Number</i>	<i>Description</i>	<i>List Price</i>	<i>Discount Category</i>
6256A	4–8GB 4mm DDS-2 Internal Tape Drive	\$1,250	A
6286A	12–24GB 4mm DDS-3 Internal Tape Drive	\$2,400	A

* Maximum discount may apply.

This is not an official Price List. Please consult the official Price Lists, or contact your Sun Sales Representative or Authorized Reseller before placing an order.

Ultra Enterprise 150 Server – Ordering Flow Chart – New Systems (continued):**Step 5: (Optional)****NETWORK CARD**

Up to 2 cards may be added.

Choose from the following:**1058A** – SBus Quad Ethernet Controller 1.1 (SQEC)**1025A** – SunFDDI Single-Attach SBus Adapter (SAS)**1059A** – SunFastEthernet 10/100 SBus Adapter 2.0**NETWORK CARD:**

<i>Part Number</i>	<i>Description</i>	<i>List Price</i>	<i>Discount Category</i>
1058A	SBus Quad Ethernet Controller 1.1 (SQEC)	\$995	A
1025A	SunFDDI Single-Attach SBus Adapter 5.0 (SAS)	\$2,500	A
1059A	SunFastEthernet 10/100 SBus Adapter 2.0	\$795	A

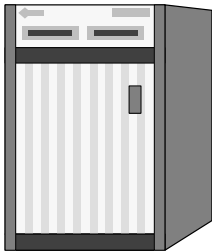
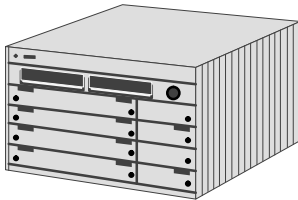
Step 6 (Optional):**CONSOLE:**

Add optional 17" TurboGX color monitor

X322A – 17" TurboGX color monitor**CONSOLE:**

<i>Part Number</i>	<i>Description</i>	<i>List Price</i>	<i>Discount Category</i>
X322A	17" color monitor, TurboGX frame buffer, and cable.	\$2,950	A

Ultra Enterprise 3000 and 4000 Servers

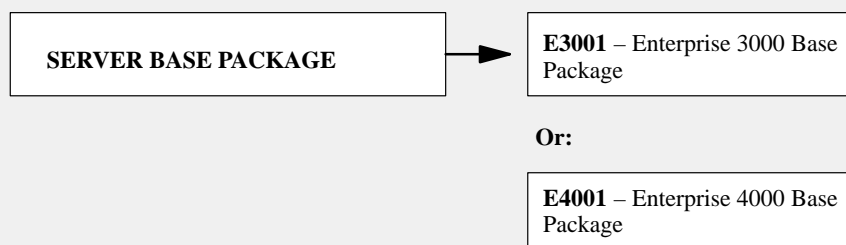
				
Product Specifications	Ultra Enterprise 3000		Ultra Enterprise 4000	
Packaging	Tower		Tabletop	
System Board Slots	4		8	
CPU	UltraSPARC		UltraSPARC	
Number of CPUs	1–6		1–14	
Clock Speed	167 MHz or 250 MHz		167 MHz or 250 MHz	
Cache per processor	Primary: 20KB instruction, 16KB on-chip Secondary: 1 MB external		Primary: 20KB instruction, 16KB on-chip Secondary: 1 MB external	
System Memory	64MB – 6GB		64MB – 14GB	
I/O Boards	1–3		1–7	
SBus Slots	2–9 (64-bit, 25 MHz)		2–21 (64-bit, 25 MHz)	
Maximum Internal Disk	42GB with 10 internal drives		16.8GB with fan disk boards	
Maximum Disk Storage	> 2TB: Up to 20 SPARCstorage Array Model 100 or 200 series Up to 18 Data Center trays in 3 cabinets		> 4TB: Up to 40 SPARCstorage Array Model 100 or 200 series Up to 42 Data Center trays in 6 cabinets	
RAS Features	Hot plug disks, Hot plug boards, Hot swap power, Hot swap cooling, Redundant power and cooling, Automatic System Recovery (ASR), SyMON, Remote Control, ECC protected data paths, ECC memory		Hot plug disks, Hot plug boards, Hot swap power, Hot swap cooling, Redundant power and cooling, Automatic System Recovery (ASR), SyMON, Remote Control, ECC protected data paths, ECC memory	
Solaris License	Solaris 2.5.1 or later		Solaris 2.5.1 or later	
Performance	1 CPU	6 CPU	6 CPU	12 CPU
SPECint_rate95	84	505	505	1,007
SPECfp_rate95	104	584	584	1,073
Estimated TPM	1,850	9,400	9,400	15,500
NFSops/sec. @ msec/op	N/A	8,368 @ 20.6	9,673 @ 15.1	15,247 @ 27.9

Ultra Enterprise 3000 and 4000 Servers – Ordering Flow Chart – New Systems

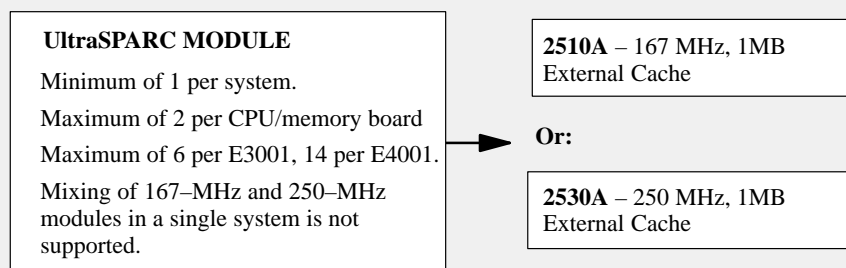
This is a sample ordering guide for the Ultra Enterprise 3000 and 4000 servers. Each step outlined by a large box in the guide represents a line item on a server sales order. A minimum legal configuration can be created by choosing one option at each step of the order process marked “**Required**”. Larger configurations can be created by choosing multiple options.

Upgrade part numbers appear after this ordering flow chart.

Step 1 – Required:



Step 2 – Required:



SERVER BASE PACKAGES:

<i>Part Number</i>	<i>Description</i>	<i>List Price</i>	<i>Discount Category</i>
E3001	Enterprise 3000 Server Base Package. Includes Tower Enclosure, 4-slot card cage, one SunCD 4, one Power/Cooling Module, and Solaris Server License.	\$11,000	A
E4001	Enterprise 4000 Server Base Package. Includes Stand-Alone Enclosure, 8-slot card cage, one SunCD 4, two Power/Cooling Modules, and Solaris Server License.	\$42,000	A

UltraSPARC MODULE:

<i>Part Number</i>	<i>Description</i>	<i>List Price</i>	<i>Discount Category</i>
2510A	UltraSPARC module, 167 MHz, 1MB External Cache.	\$12,000	A
2530A	UltraSPARC module, 250 MHz, 1MB External Cache.	\$16,000	A

NOTE:

The 250-MHz module requires Solaris 2.5.1 or higher. Installing software patch #103640 (version -06 or higher) is strongly recommended.

Ultra Enterprise 3000 and 4000 Servers – Ordering Flow Chart – New Systems (continued):**Step 3 – Required:****SYSTEM MEMORY**

Minimum of 1 per system.
Maximum of 2 per CPU/memory board.
Maximum of 6 per E3001, 14 per E4001.

Choose from the following:

7021A – 64MB ECC memory expansion (8 x 8MB SIMMs)
7022A – 256MB ECC memory expansion (8 x 32MB SIMMs)
7023A – 1GB ECC memory expansion (8 x 128MB SIMMs)

SYSTEM MEMORY:

<i>Part Number</i>	<i>Description</i>	<i>List Price</i>	<i>Discount Category</i>
7021A	64MB ECC memory expansion (8 x 8MB SIMMs)	\$2,500	A*
7022A	256MB ECC memory expansion (8 x 32MB SIMMs)	\$4,750	A*
7023A	1GB ECC memory expansion (8 x 128MB SIMMs)	\$48,500	A*

NOTES:

- 1 Memory expansion occupies 1 memory bank consisting of 8 SIMMs.
- Mixing memory options is supported as long as all SIMMs in 1 memory bank are the same.

Step 4 – Required:**CPU / MEMORY BOARD**

Minimum of 1 per system.
Maximum of 3 per E3001, 7 per E4001.
Total number of slots available for CPU/Memory, I/O and Disk boards is:
4 in Enterprise 3001
8 in Enterprise 4001

2600A – CPU/Memory Board

CPU / MEMORY BOARD:

<i>Part Number</i>	<i>Description</i>	<i>List Price</i>	<i>Discount Category</i>
2600A	CPU/Memory Board, two empty CPU slots, two empty memory banks.	\$9,000	A

* Maximum discount may apply.

Ultra Enterprise 3000 and 4000 Servers – Ordering Flow Chart – New Systems (continued):

Step 5 – Required:

I/O BOARD:

Minimum of 1 per system.
Maximum of 3 per E3001, 7 per E4001.
Total number of slots available for CPU/
Memory, I/O and Disk boards is 4 in
Enterprise 3001 & 8 in Enterprise 4001.

Either:

2610A – SBus I/O Board

Or:

2620A – Graphics I/O Board

I/O BOARD:

<i>Part Number</i>	<i>Description</i>	<i>List Price</i>	<i>Discount Category</i>
2610A	SBus I/O Board, three empty SBus slots, two empty 25 MB/sec. Fibre Channel sockets, one Fast/Wide SCSI interface, one 10/100 Mb/sec. Ethernet (Twisted Pair or MII) interface.	\$6,500	A
2620A	Graphics I/O Board, one UPA slot, two empty SBus slots, two empty 25 MB/sec. Fibre Channel sockets, one Fast/Wide SCSI interface, one 10/100 Mb/sec. Ethernet (Twisted Pair or MII) interface.	\$7,000	A

Step 6 – May Be Required (see notes under pricing info at right)

POWER / COOLING MODULE:

Minimum of 1 per system.
Maximum of 3 per E3001, 4 per E4001.
One included in E3001 Base Package,
two included in E4001 Base Package.

954A – Power / Cooling
Module, 300W

POWER / COOLING MODULE:

<i>Part Number</i>	<i>Description</i>	<i>List Price</i>	<i>Discount Category</i>
954A	Power/Cooling Module, 300W.	\$1,800	A

NOTES: A minimum of one factory installed power/cooling module is required for:

- every 2 factory-installed system boards (2600A), and/or
- every 2 I/O boards (2610A or 2620A), and/or
- every 2 disk boards (5161A)

Step 7 – Optional – E3001 Only:

SECOND PERIPHERAL POWER SUPPLY:

Maximum of 1 optional per system.
Provides redundant power for internal
peripherals.

958A – Second Peripheral
Power Supply

SECOND PERIPHERAL POWER SUPPLY:

<i>Part Number</i>	<i>Description</i>	<i>List Price</i>	<i>Discount Category</i>
958A	Second Peripheral Power Supply, 184W, Enterprise 3000 only.	\$1,500	A

Ultra Enterprise 3000 and 4000 Servers – Ordering Flow Chart – New Systems (continued):**Step 8 – Optional:****INTERNAL DISK OPTIONS:**

E3001 Only – Maximum of 10 optional internal drives.

E4001 Only – Maximum of four Disk Boards.

E3001 Only – Choose from:

5153A – 2.1GB 7200 RPM internal disk drive

5214A – 4.2GB 7200 RPM internal disk drive

5251A – 9.1GB 7200 RPM Internal disk drive

E4001 Only:

5161A – 4.2GB Disk Board

INTERNAL DISK OPTIONS:

<i>Part Number</i>	<i>Description</i>	<i>List Price</i>	<i>Discount Category</i>
E3000 Internal Disk Options			
5153A	Internal 2.1GB 7200 RPM Fast/Wide SCSI-2 Disk Drive	\$1,050	A*
5214A	Internal 4.2GB 7200 RPM Fast/Wide SCSI-2 Disk Drive	\$1,450	A*
5251A	Internal 9.1GB 7200 RPM Fast/Wide SCSI-2 Disk Drive	\$2,320	A*
E4000 Internal Disk Options			
5161A	4.2GB Disk Board, 2 x 2.1GB 7200 RPM Fast/Wide SCSI Disk Drives	\$3,800	A*

Step 9 – Optional:**INTERNAL TAPE OPTIONS:**

Maximum of 1 internal tape drive.

Choose from the following:

6283A – 12–24GB 4mm DDS-3 Internal Tape Drive

6206A – Internal 14GB 8mm Tape Drive

6104A – Internal 2.5GB 1/4" Tape Drive

INTERNAL TAPE OPTIONS:

<i>Part Number</i>	<i>Description</i>	<i>List Price</i>	<i>Discount Category</i>
6283A	12–24GB 4mm DDS-3 Internal Tape Drive	\$2,400	A
6206A	Internal 14GB 8mm Tape Drive	\$2,700	A
6104A	Internal 2.5GB 1/4-inch Tape Drive	\$900	A

* Maximum discount may apply.

Ultra Enterprise 3000 and 4000 Servers – Ordering Flow Chart – New Systems (continued):

Step 10 – Optional:

SPARCstorage ARRAY OPTIONS:

Maximum of 20 per E3001.
Maximum of 40 per E4001.

Choose from the following:

X6590A – Array Model 112,
6 x 2.1GB disk drives
X6591A – Array Model 112,
18 x 2.1GB disk drives
X6592A – Array Model 112,
30 x 2.1GB disk drives

SPARCstorage ARRAY OPTIONS:

<i>Part Number</i>	<i>Description</i>	<i>List Price</i>	<i>Discount Category</i>
X6590A	SPARCstorage Array Model 112 with 12.6GB (6 x 2.1GB) 7200 RPM disk drives.	\$21,700	A*
X6591A	SPARCstorage Array Model 112 with 37.8GB (18 x 2.1GB) 7200 RPM disk drives.	\$33,900	A*
X6592A	SPARCstorage Array Model 112 with 63GB (30 x 2.1GB) 7200 RPM disk drives.	\$45,700	A*

Step 11 – Optional:

EXTERNAL TAPE OPTIONS:

Maximum of 4 external tape drives.
Maximum of 4 SPARCstorage Libraries, SPARCstorage DLT4700 AutoLoaders, or Enterprise Tape Libraries.

Choose from the following:

X6223A – 140GB SPARC-storage Library, 1 tape drive, stackable unit.
X6224A – 140GB SPARC-storage Library, full configuration, stackable.
X6225A – 400GB SPARC-storage Library, 1 tape drive, stackable unit.
X6230A – 20–40GB 8mm Tape UniPack
X6052 – 20–40GB SPARC-storage DLT4000 tape drive in external desktop enclosure.
X6071A – 140–280GB SPARCstorage DLT4700 Tape Auto-Loader in external desktop enclosure.
X6072A – 1TB Enterprise Tape Library ETL 4/1000.

EXTERNAL TAPE OPTIONS:

<i>Part Number</i>	<i>Description</i>	<i>List Price</i>	<i>Discount Category</i>
X6223A	140GB SPARCstorage Library, 1 tape drive, stackable unit (50–68 pin SCSI cable).	\$8,800	A
X6224A	140GB SPARCstorage Library, full configuration, stackable unit (50–68 pin SCSI cable).	\$12,800	A
X6225A	400GB SPARCstorage Library, 1 tape drive, stackable unit.	\$27,000	A
X6230A	20–40GB 8mm Tape UniPack with 68–68 pin SCSI cable.	\$7,125	A
X6052A	20–40GB SPARCstorage DLT4000 Tape Drive in external desktop enclosure (50–68 pin SCSI cable).	\$7,100	A
X6071A	140–280GB SPARCstorage DLT4700 Auto-Loader in external desktop enclosure (50–68 pin SCSI cable).	\$16,000	A
X6072A	1TB Enterprise Tape Library ETL 4/1000, floor standing unit.	\$85,000	A

* Maximum discount may apply.

Ultra Enterprise 3000 and 4000 Servers – Ordering Flow Chart – New Systems (continued):**Step 12 – Optional:****INTERFACES & HOST ADAPTERS:**

These options may be required to support configured mass storage and tape devices.

Choose from the following:

595A – 25 MB/sec. Fibre Channel Optical Module.
1057A – 25 MB/sec. SBus Fibre Channel Host Adapter.
1062A – SBus Fast/Wide Differential Intelligent SCSI-2 Host Adapter (DWIS/S).
1063A – SBus Single-Ended Fast/Wide Intelligent SCSI-2 Host Adapter (SWIS/S)
X1018A – SunSwift SBus Adapter

INTERFACES & HOST ADAPTERS:

<i>Part Number</i>	<i>Description</i>	<i>List Price</i>	<i>Discount Category</i>
595A	25 MB/sec. Fibre Channel Optical Module	\$600	A
1057A	25 MB/sec. SBus Fibre Channel Host Adapter	\$1,600	A
1062A	SBus Fast/Wide Differential Intelligent SCSI-2 Host Adapter (DWIS/S).	\$1,295	A
1063A	SBus Single-Ended Fast/Wide Intelligent SCSI-2 Host Adapter (SWIS/S)	\$1,195	A
X1018A	SunSwift SBus Adapter	\$1,095	A

Step 13 – Required:**POWER CORD / COUNTRY KIT:**

Order one kit at no charge.
 Order a Power Cord Kit when server does not include a monitor.
 Order a Power Cord Kit for each external peripheral if required.
 Order a Type 5 Country Kit when server includes a monitor.

POWER CORD / COUNTRY KIT:

<i>Part Number</i>	<i>Description</i>	<i>List Price</i>	<i>Discount Category</i>
X311L	Localized power cord kit, North American/Asian (server country kit)	N/C	–
X3500A	Type 5 Country Kit, North American, U.S. or Canada only. Order only when purchasing monitors.	N/C	–
X3540A	Type 5 Country Kit, UNIX, North American, U.S. or Canada only. Order only when purchasing monitors.	N/C	–

NOTE: See the official End User Price Book for a complete listing of power cords and country kits.

Upgrades to Enterprise 3000 and Enterprise 4000 Servers:

<i>From</i>	<i>Part Number and Description</i>	<i>List Price</i>	<i>Discount Category</i>
<i>Enterprise 3000 Upgrades</i>			
Sun 3XO, 4X0, 630MP or 670MP	UG-3/4/6-E3001X Chassis upgrade to Enterprise 3000 including Enclosure, one SunCD 4, one Power/Cooling Module, one CPU/Memory Board, one SBus I/O Board, and Solaris Server License.	\$21,100	A*
Any desktop server	UGDTSERV-E3001X Chassis upgrade to Enterprise 3000 including Enclosure, one SunCD 4, one Power/Cooling Module, one CPU/Memory Board, one SBus I/O Board, and Solaris Server License.	\$22,500	A*
<i>Enterprise 4000 Upgrades</i>			
Sun 3XO, 4X0, 630MP or 670MP	UG-3/4/6-E4001X Chassis upgrade to Enterprise 4000 including Enclosure, one SunCD 4, two Power/Cooling Modules, one CPU/Memory Board, one SBus I/O Board, and Solaris Server License.	\$48,000	A*
SPARCserver 1000 or 690MP	UGS1000-E4001X Chassis upgrade to Enterprise 4000 including Enclosure, one SunCD 4, two Power/Cooling Modules, one CPU/Memory Board, one SBus I/O Board, and Solaris Server License.	\$45,000	A*
Enterprise 3000	UGE3000-E4000 Enclosure upgrade to Enterprise 4000 including Stand-alone Enclosure, card cage, peripheral power supply, one PCM, and AC box.	\$33,500	A*

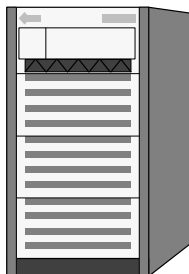
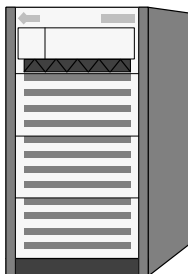
* Maximum discount may apply.

Module, System Board and Clock Board Upgrades for Enterprise 3000 and Enterprise 4000 Servers:

<i>From</i>	<i>Part Number and Description</i>	<i>List Price</i>	<i>Discount Category</i>
<i>UltraSPARC Module Upgrades</i>			
167 MHz UltraSPARC module with 512KB external cache	UG-M2500-M2510 Module upgrade to 167 MHz UltraSPARC module with 1MB external cache.	\$8,000	A*
Any SuperSPARC module	UG-M2510 Upgrade to 167 MHz UltraSPARC module with 1MB external cache.	\$9,500	A*
Any 167 MHz UltraSPARC module	UG-M2510-M2530 Upgrade to 250 MHz UltraSPARC module with 1MB external cache.	\$12,000	A*
Any non-UltraSPARC module	UG-M2530 Upgrade to 250 MHz UltraSPARC module with 1MB external cache.	\$13,500	A*
<i>System Board Upgrades to any Enterprise X000 CPU/Memory Board</i>			
SPARCserver 1000(E)	UGSB1000-X-64M System Board Upgrade to Enterprise CPU/Memory Board with 64MB memory.	\$10,550	A*
SPARCserver 1000(E)	UGSB1000-X-256M System Board Upgrade to Enterprise CPU/Memory Board with 256MB memory.	\$11,890	A*
SPARCserver 2000(E)	UGSB2000-X-0M System Board Upgrade to Enterprise CPU/Memory Board with no memory.	\$6,650	A*
SPARCserver 2000(E)	UGSB2000-X-256M System Board Upgrade to Enterprise CPU/Memory Board with 256MB memory.	\$11,390	A*
<i>Clock Board Upgrade (to upgrade existing Enterprise X000 servers to "X0001" level)</i>			
Enterprise X000	UG-ENT-CLOCKBD Enterprise System Clock Board upgrade.	\$1,155	A*

* Maximum discount may apply.

Ultra Enterprise 5000 and 6000 Servers

					
Product Specifications	Ultra Enterprise 5000	Ultra Enterprise 6000			
Packaging	Data Center Cabinet	Data Center Cabinet			
System Board Slots	8	16			
CPU	UltraSPARC	UltraSPARC			
Number of CPUs	1–14	1–30			
Clock Speed	167 MHz or 250 MHz	167 MHz or 250 MHz			
Cache per processor	Primary: 20KB instruction, 16KB on–chip Secondary: 1 MB external	Primary: 20KB instruction, 16KB on–chip Secondary: 1 MB external			
System Memory	64MB – 14GB	64MB – 30GB			
I/O Boards	1–7	1–15			
SBus Slots	2–21 (64–bit, 25 MHz)	2–45 (64–bit, 25 MHz)			
Maximum Internal Disk	216GB with 4 Data Center trays, 118GB with 4 SPARCstorage RSM trays, 189GB with 3 SPARCstorage Array Model 100 series	162GB with 3 Data Center trays, 88GB with 3 SPARCstorage RSM trays, 126GB with 2 SPARCstorage Array Model 100 series			
Maximum Disk Storage	> 6TB: Up to 40 SPARCstorage Array Model 100 or 200 series Up to 42 Data Center trays in 6 cabinets	> 10TB: Up to 60 SPARCstorage Array Model 100 or 200 series Up to 90 Data Center trays in 12 cabinets			
RAS Features	Hot plug disks, Hot plug boards, Hot swap power, Hot swap cooling, Redundant power and cooling, Automatic System Recovery (ASR), SyMON, Remote Control, ECC protected data paths, ECC memory	Hot plug disks, Hot plug boards, Hot swap power, Hot swap cooling, Redundant power and cooling, Automatic System Recovery (ASR), SyMON, Remote Control, ECC protected data paths, ECC memory			
Solaris License	Solaris 2.5.1 or later				
Performance	1 CPU	12 CPU	12 CPU	24 CPU	30 CPU
SPECint_rate95	84	1,007	1,007	1,942	2,317
SPECfp_rate95	104	1,073	1,073	1,656	1,782
Estimated TPM	1,850	15,500	15,500	22,000	N/A
NFSops/sec. @ msec/op	15,247 @ 27.9	15,247 @ 27.9	17,737 @ 23.0	24,477 @ 20.4	N/A

Ultra Enterprise 5000 and 6000 Servers – Ordering Flow Chart – New Systems

This is a sample ordering guide for the Ultra Enterprise 5000 and 6000 servers. Each step outlined by a large box in the guide represents a line item on a server sales order. A minimum legal configuration can be created by choosing one option at each step of the order process marked “**Required**”. Larger configurations can be created by choosing multiple options.

Upgrade part numbers appear after this ordering flow chart.

Step 1 – Required:

SERVER BASE PACKAGE

Either:

E5001 – Enterprise 5000 Base Package

Or:

E6001 – Enterprise 6000 Base Package



Step 2 – Required:

UltraSPARC MODULE

Minimum of 1 per system.

Maximum of 2 per CPU/memory board

Maximum of 14 per E5001, 30 per E6001.

Mixing of 167-MHz and 250-MHz modules in a single system is not supported.

Either:

2510A – 167 MHz, 1MB External Cache

Or:

2530A – 250 MHz, 1MB External Cache



SYSTEM CABINETS – NEW SYSTEMS:

<i>Part Number</i>	<i>Description</i>	<i>List Price</i>	<i>Discount Category</i>
E5001	Enterprise 5000 Server Base Package. Includes Data Center System Cabinet, 8-slot card cage, one SunCD 4, two Power/Cooling Modules, and Solaris Server License.	\$57,000	A
E6001	Enterprise 6000 Server Base Package. Includes Data Center System Cabinet, 16-slot card cage, one SunCD 4, two Power/Cooling Modules, and Solaris Server License.	\$175,000	A

UltraSPARC MODULE:

<i>Part Number</i>	<i>Description</i>	<i>List Price</i>	<i>Discount Category</i>
2510A	UltraSPARC module, 167 MHz, 1MB External Cache.	\$12,000	A
2530A	UltraSPARC module, 250 MHz, 1MB External Cache.	\$16,000	A

This is not an official Price List. Please consult the official Price Lists, or contact your Sun Sales Representative or Authorized Reseller before placing an order.

Ultra Enterprise 5000 and 6000 Servers – Ordering Flow Chart – New Systems (Continued):**Step 3 – Required:****SYSTEM MEMORY**

Minimum of 1 per system.
Maximum of 2 per CPU/memory board.
Maximum of 14 per E5001, 30 per E6001.

Choose from the following:

7021A – 64MB ECC memory expansion (8 x 8MB SIMMs)
7022A – 256MB ECC memory expansion (8 x 32MB SIMMs)
7023A – 1GB ECC memory expansion (8 x 128MB SIMMs)

SYSTEM MEMORY:

<i>Part Number</i>	<i>Description</i>	<i>List Price</i>	<i>Discount Category</i>
7021A	64MB ECC memory expansion (8 x 8MB SIMMs)	\$2,500	A*
7022A	256MB ECC memory expansion (8 x 32MB SIMMs)	\$4,750	A*
7023A	1GB ECC memory expansion (8 x 128MB SIMMs)	\$48,500	A*

NOTES:

- One Memory expansion occupies 1 memory bank consisting of 8 SIMMs.
- Mixing memory options is supported as long as all SIMMs in 1 memory bank are the same.

Step 4 – Required:**CPU / MEMORY BOARD**

Minimum of 1 per system.
Maximum of 7 per E5001, 15 per E6001.
Total number of slots available for CPU/Memory Boards and I/O Boards is 8 per E5001 and 16 per E6001.

2600A – CPU/Memory Board

CPU / MEMORY BOARD:

<i>Part Number</i>	<i>Description</i>	<i>List Price</i>	<i>Discount Category</i>
2600A	CPU/Memory Board, two empty CPU slots, two empty memory banks.	\$9,000	A

NOTE:

- One CPU/Memory Board supports up to 2 memory expansion options and up to 2 UltraSPARC modules.

* Maximum discount may apply.

Ultra Enterprise 5000 and 6000 Servers – Ordering Flow Chart – New Systems (Continued):**Step 5 – Required:****I/O BOARD:**

Minimum of 1 per system.

Maximum of 7 per E5001, 15 per E6001.

Total number of slots available for CPU/Memory Boards and I/O Boards: 8 per E5001 and 16 per E6001.

Either:

2610A – SBus I/O Board

Or:

2620A – Graphics I/O Board

I/O BOARD:

<i>Part Number</i>	<i>Description</i>	<i>List Price</i>	<i>Discount Category</i>
2610A	SBus I/O Board, three empty SBus slots, two empty 25 MB/sec. Fibre Channel sockets, one Fast/Wide SCSI interface, one 10/100 Mb/sec. Ethernet (Twisted Pair or MII) interface.	\$6,500	A
2620A	Graphics I/O Board, one UPA slot, two empty SBus slots, two empty 25 MB/sec. Fibre Channel sockets, one Fast/Wide SCSI interface, one 10/100 Mb/sec. Ethernet (Twisted Pair or MII) interface.	\$7,000	A

Step 6 – Optional:**POWER / COOLING MODULE:**

Two included in Server Base Package.

Maximum of 4 per E5001, 8 per E6001.

One per 2 adjacent system boards is required.

954A – Power / Cooling Module, 300W

POWER / COOLING MODULE:

<i>Part Number</i>	<i>Description</i>	<i>List Price</i>	<i>Discount Category</i>
954A	Power/Cooling Module, 300W.	\$1,800	A

Ultra Enterprise 5000 and 6000 Servers – Ordering Flow Chart – New Systems (Continued):**Step 7 – Optional:****INTERNAL DISK STORAGE OPTIONS:**

Maximum of 4 Disk Boards in E5001, 2 in E6001.

– OR –

Maximum of 3 SPARCstorage Array Model 112's in E5001, 2 in E6001. Array Accessories Kit required.

– OR –

Maximum of 4 SPARCstorage Array RSM's in E5001, 3 in E6001.

Choose from the following:

5161A – 4.2GB Disk Board

Or:

6590AR4 – Array Model 112, 6 x 2.1GB 7400 RPM drives
6591AR4 – Array Model 112, 18 x 2.1GB 7200 RPM drives
6592AR4 – Array Model 112, 30 x 2.1GB 7200 RPM drives

Or:

6503AR4 – 3 x 4.2GB 5400 RPM SPARCstorage RSM Disk Tray
6504AR4 – 7 x 4.2GB 5400 RPM SPARCstorage RSM Disk Tray

INTERNAL DISK STORAGE OPTIONS:

<i>Part Number</i>	<i>Description</i>	<i>List Price</i>	<i>Discount Category</i>
Disk Board			
5161A	4.2GB Disk Board with 2 x 2.1GB 7200 RPM Fast/Wide SCSI disk drives.	\$3,800	A*
SPARCstorage Arrays			
6590AR4	12.6GB SPARCstorage Array Model 112 with 6 x 2.1GB 7200 RPM disk drives.	\$21,700	A*
6591AR4	37.8GB SPARCstorage Array Model 112 with 18 x 2.1GB 7200 RPM disk drives.	\$33,900	A*
6592AR4	63GB SPARCstorage Array Model 112 with 30 x 2.1GB 7200 RPM disk drives.	\$45,700	A*
959A	SPARCstorage Array Accessories Kit for Enterprise System or Expansion Cabinets. NOTE: Must be ordered with factory-installed Array Model 112 in Enterprise System Cabinet or Enterprise Expansion Cabinet.	N/C	–
SPARCstorage RSM Disk Trays			
6503AR4	SPARCstorage RSM disk tray with 2 x 4.2GB 5400 RPM drives.	\$9,650	A*
6504AR4	SPARCstorage RSM disk tray with 7 x 4.2GB 5400 RPM drives.	\$15,850	A*

* Maximum discount may apply.

Ultra Enterprise 5000 and 6000 Servers – Ordering Flow Chart – New Systems (Continued):

Step 8 – Optional:

INTERNAL TAPE OPTIONS:

Maximum of 1 optional Internal Tape Drive.

Maximum of 1 Multi-Tape Backup Tray or SPARCstorage Library.

Additional Expansion Tape Drive Options are available for the Multi-Tape Backup Tray.

Choose from the following:

6283AR4 – 12–24GB 4mm DDS–3 Internal Tape Drive

6206AR4 – Internal 14GB 8mm Tape Drive

6104AR4 – Internal 2.5GB 1/4” Tape Drive

AND one from the following:

6292AR4 – 72–144GB 4mm DDS–3 Auto–Loader with Multi–Tape Backup Tray

6205AR4 – 14GB 8mm Tape Drive with Multi–Tape Backup Tray

6056AR4 – SPARCstorage DLT4000 Tape Drive with Multi–Tape BackupTray

6221AR4 – 140GB SPARC–storage Library, 1 Tape Drive

6222AR4 – 140GB SPARC–storage Library, full configuration

6226AR4 – 400GB SPARC–storage Library Model 8/400.

INTERNAL TAPE OPTIONS:

<i>Part Number</i>	<i>Description</i>	<i>List Price</i>	<i>Discount Category</i>
<i>Choose from the following:</i>			
6283A	12–24GB 4mm DDS–3 Internal Tape Drive	\$2,400	A
6206A	Internal 14GB 8mm Tape Drive	\$2,700	A
6104A	Internal 2.5GB 1/4–inch Tape Drive	\$900	A
<i><u>AND</u> one from the following:</i>			
6292AR4	72–144GB 4mm DDS–3 Tape Auto–Loader with Multi–Tape Backup Tray	\$6,000	A
6205AR4	14GB 8mm Expansion Tape Drive with the Multi–Tape Backup Tray (50–68 pin SCSI cable).	\$4,700	A
6056AR4	20–40GB SPARCstorage DLT4000 Expansion Tape Drive with the Multi–Tape Backup Tray (50–68 pin SCSI cable).	\$8,500	A
6221AR4	140GB SPARCstorage Library with one Tape Drive (50–68 pin SCSI cable).	\$8,800	A
6222AR4	140GB SPARCstorage Library, full configuration (50–68 pin SCSI cable).	\$12,800	A
6226AR4	400GB SPARCstorage Library Model 8/400, rack mountable unit, with tape drives.	\$27,000	A

Ultra Enterprise 5000 and 6000 Servers – Ordering Flow Chart – New Systems (Continued):

Step 9 – Optional:

INTERFACES & HOST ADAPTERS:

These options may be required to support configured mass storage and tape devices.

Either:

595A – 25MB/sec. Fibre Channel Optical Module

Or:

1057A – SBus 25MB/sec. Fibre Channel Host Adapter

Or:

1062A – SBus Differential Fast/Wide Intelligent SCSI-2 Host Adapter (DWIS/S)

Or:

1063A – SBus Fast/Wide Intelligent SCSI-2 Host Adapter (SWIS/S)

Or:

X1018A – SunSwift SBus Adapter

INTERFACES & HOST ADAPTERS.:

<i>Part Number</i>	<i>Description</i>	<i>List Price</i>	<i>Discount Category</i>
595A	25MB/sec. Fibre Channel Optical Module (FC25/OM)	\$600	A
1057A	25MB/sec. Fibre Channel/SBus Host Adapter, single channel host connection for SPARCstorage Array	\$1,600	A
1062A	SBus Differential Fast/Wide Intelligent SCSI-2 Host Adapter (DWIS/S).	\$1,295	A
1063A	SBus Single-Ended Fast/Wide Intelligent SCSI-2 Host Adapter (SWIS/S) card	\$1,195	A
X1018A	SunSwift SBus Adapter	\$1,095	A

Step 10:

POWER CORD:

Order one kit for every Enterprise System or Expansion cabinet.
Maximum of 1 per cabinet.

POWER CORD / COUNTRY KIT:

<i>Part Number</i>	<i>Description</i>	<i>List Price</i>	<i>Discount Category</i>
3800A	Power Cord for Enterprise System and Expansion Cabinets, U.S. version (NEMA L6-30P plug).	N/C	–
3848A	Power Cord for Enterprise System and Expansion Cabinets, International version (IEC 309 plug, 32A, 250V).	N/C	–

Upgrades to Enterprise 5000 and Enterprise 6000 Servers:

<i>From</i>	<i>Part Number and Description</i>	<i>List Price</i>	<i>Discount Category</i>
<i>Enterprise 5000 Upgrades</i>			
SPARCserver 1000, 690MP	UGS1000–E5001X Chassis upgrade to Enterprise 5000 including System Cabinet, one SunCD 4, two Power/Cooling Modules, one CPU/Memory Board, one SBus I/O Board, and Solaris Server License.	\$57,500	A*
SPARCcenter 2000	UGS2000–E5001X Chassis upgrade to Enterprise 5000 including System Cabinet, one SunCD 4, two Power/Cooling Modules, one CPU/Memory Board, one SBus I/O Board, and Solaris Server License.	\$49,500	A*
Enterprise 3000	UGE3000–E5000 Enclosure upgrade to Enterprise 5000 including rack, card cage, AC box, SCSI Interface assembly, and key switch assembly.	\$51,000	A*
<i>Enterprise 6000 Upgrades</i>			
SPARCcenter 2000(E)	UGS2000–E6001X Chassis upgrade to Enterprise 5000 including Data Center System Cabinet, one SunCD 4, two Power/Cooling Modules, one CPU/Memory Board, one SBus I/O Board, and Solaris Server License.	\$120,500	A*
Enterprise 4000	UGE4000–E6000 Enclosure upgrade to Enterprise 6000 including rack, card cage, AC box, SCSI Interface assembly, and key switch assembly.	\$145,000	A*
Enterprise 5000	UGE5000–E6000 Enclosure upgrade to Enterprise 6000 including card cage.	\$128,000	A*

* Maximum discount may apply.

Module, System Board and Clock Board Upgrades for Enterprise 5000 and Enterprise 6000 Servers:

<i>From</i>	<i>Part Number and Description</i>	<i>List Price</i>	<i>Discount Category</i>
<i>UltraSPARC Module Upgrades</i>			
167 MHz UltraSPARC module with 512KB external cache	UG-M2500-M2510 Module upgrade to 167 MHz UltraSPARC module with 1MB external cache.	\$8,000	A*
Any SuperSPARC module	UG-M2510 Upgrade to 167 MHz UltraSPARC module with 1MB external cache.	\$9,500	A*
Any 167 MHz UltraSPARC module	UG-M2510-M2530 Upgrade to 250 MHz UltraSPARC module with 1MB external cache.	\$12,000	A*
Any non-UltraSPARC module	UG-M2530 Upgrade to 250 MHz UltraSPARC module with 1MB external cache.	\$13,500	A*
<i>System Board Upgrades to any Enterprise X000 CPU/Memory Board</i>			
SPARCserver 1000(E)	UGSB1000-X-64M System Board Upgrade to Enterprise CPU/Memory Board with 64MB memory.	\$10,550	A*
SPARCserver 1000(E)	UGSB1000-X-256M System Board Upgrade to Enterprise CPU/Memory Board with 256MB memory.	\$11,890	A*
SPARCserver 2000(E)	UGSB2000-X-0M System Board Upgrade to Enterprise CPU/Memory Board with no memory.	\$6,650	A*
SPARCserver 2000(E)	UGSB2000-X-256M System Board Upgrade to Enterprise CPU/Memory Board with 256MB memory.	\$11,390	A*
<i>Clock Board Upgrade (to upgrade existing Enterprise X000 servers to "X0001" level)</i>			
Enterprise X000 servers	UG-ENT-CLOCKBD Enterprise X000 Clock Board Upgrade.	\$1,155	A*

* Maximum discount may apply.